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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,533	06/09/2000	EUGENIE CHARRIERE	004900-172	2035

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EXAMINER	
SERGENT, RABON A	
ART UNIT	**PAPER NUMBER**
1711	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/485,533	CHARRIERE ET AL.	
	Examiner	Art Unit	
	Rabon Sergent	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *59-62,66,67 and 69-76* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *59-62,66,67 and 69-76* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. In view of the necessity of applying the following prior art rejections, prosecution on the merits has been reopened; accordingly, the finality of the Office action of August 9, 2006 has been withdrawn. The amendment of April 3, 2007 has been entered; accordingly, the rejections set forth within the final Office action of August 9, 2006 have been withdrawn. It is regretted that the following rejections were not set forth earlier in prosecution.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 69, 71, and 72 are rejected under 35 U.S.C. 102(b) as being anticipated by Haberle ('176) or Weyland et al. ('421) or WO 97/23536.

Each reference discloses allophanate modified polyisocyanates produced by reacting excess amounts of diisocyanates, such as hexamethylene diisocyanate or isophorone diisocyanate, with simple polyhydric alcohols, such as trimethylolpropane. See column 3, lines 5-14 within Haberle. See column 2, lines 28-39 within Weyland et al. See page 10, lines 4-14 within WO 97/23536. The position is taken that the disclosed allophanate modified polyisocyanates possess a structure that satisfies applicants' formula III.

4. Claims 66 and 69-76 are rejected under 35 U.S.C. 102(b) as being anticipated by Malofsky et al. ('135).

Patentees disclose low viscosity polyisocyanates containing uretdione and allophanate groups and their use with polyester polyols or polyacrylate polyols to yield coating compositions. The polyisocyanates are produced by dimerizing and allophanizing a (cyclo)aliphatic diisocyanate in the presence of a polyalcohol, such as trimethylolpropane or pentaerythritol. See abstract; column 6, lines 35+; column 7, lines 1-24; column 8, lines 38 and 39; column 10, lines 43+; and Examples. In view of the disclosed low degree of dimerization conversion at the point that the polyalcohol component is added, the position is taken that compounds that correspond to formulas X, II, and III, and mixtures of these compounds inherently result from the disclosed process.

5. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Malofsky et al. ('135).

As aforementioned, patentees disclose low viscosity polyisocyanates containing uretdione and allophanate groups. The polyisocyanates are produced by dimerizing and allophanizing a (cyclo)aliphatic diisocyanate in the presence of a polyalcohol, such as

trimethylolpropane or pentaerythritol. See abstract; column 6, lines 35+; column 7, lines 1-24; column 8, lines 38 and 39; and Examples. In view of the disclosed low degree of dimerization conversion at the point that the polyalcohol component is added, the position is taken that compounds that correspond to formulas X, II, and III, and mixtures of these compounds result from the disclosed process. Though patentees are silent regarding the specific incorporation of isocyanurates or biurets into the uretdione and allophanate containing compositions, patentees clearly provide for the use of triisocyanates within the process and clearly allow for the presence of isocyanate based functional groups in addition to the uretdione groups and allophanate groups (see column 1, lines 11-15 and column 7, lines 4-24). Furthermore, within the Background of the Invention, patentees disclose that the use of trimers to reduce polyisocyanate viscosity was well known at the time of invention. Therefore, since patentees allow for the use of triisocyanates and the presence of additional isocyanate derived groups and further disclose that the use of trimers to control viscosity was known, the position is taken that it would have been obvious to one of ordinary skill in the art to incorporate isocyanurate or biuret trimers into the composition for their art recognized function of reducing viscosity.

6. Claims 59-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malofsky et al. ('135) in view of Muller et al. ('171).

As aforementioned, Malofsky et al. disclose low viscosity polyisocyanates containing uretdione and allophanate groups, produced by dimerizing and allophanizing a (cyclo)aliphatic diisocyanate in the presence of a polyalcohol, such as trimethylolpropane or pentaerythritol. See abstract; column 6, lines 35+; column 7, lines 1-24; column 8, lines 38 and 39; and Examples.

7. Malofsky et al. differ primarily from applicants in that Malofsky et al. disclose the use of dimerization catalyst, whereas applicants exclude a dimerization catalyst. However, the position is taken that it was known at the time of invention that dimerization of polyisocyanates may be performed in the absence of a catalyst. Muller et al. disclose at column 3, lines 31-36 that dimerization of polyisocyanates may be performed in the absence of a catalyst by heating to temperatures of 120°C to 150°C. Muller et al. further disclose that aliphatic diisocyanates, such as hexamethylene diisocyanate, may be dimerized. See column 4, lines 20+. Though Muller et al. are silent regarding applicants' claimed time frame, the position is taken that adjusting the heating time amounts to the obvious optimization of a result effective variable, since, at a given temperature, one would have expected that conversion and the degree of ring cleavage is dependent upon reaction time. Accordingly, since it was known that polyisocyanates can be dimerized simply by heating in the absence of a catalyst, the position is taken that one of ordinary skill in the art would have realized that the dimerization catalyst of Malofsky et al. could be deleted and that one of ordinary skill would have been motivated to do so, so as to eliminate the requirement for an additional component and to eliminate the requirement that the dimerization catalyst be deactivated or poisoned.

8. With respect to the requirement set forth within claim 60, though Malofsky et al. are silent regarding the specific addition of components that correspond to formulas II or III; as aforementioned, the position is taken that Malofsky et al. encompass such compounds, since they result from the reaction of the disclosed polyalcohol. Accordingly, it would have been obvious to modify the polyalcohols of Malofsky et al. by prereacting them with isocyanate, prior to their introduction into the reaction system. Such a modification would have been obvious to the

skilled artisan and would have allowed more definite control of the final product by permitting more control of the groups to be reacted.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

RABON SERGENT
PRIMARY EXAMINER

R. Sergent
April 19, 2007